

REMARKS/ARGUMENTS

The rejections presented in the Office Action dated September 7, 2007 (hereinafter Office Action) have been considered. Claims 1-24 remain pending in the application. Reconsideration of the pending claims and allowance of the application in view of the present response is respectfully requested.

Claims 1-7 are rejected based on 35 U.S.C. §112, second paragraph, as being indefinite. Applicants respectfully traverse the rejections, but in the interests of facilitating prosecution have amended Claim 1 to more clearly indicate that the uniform format is independent of the vocabularies and behaviors of the plurality of service discovery protocols. These amendments are supported in the Application as filed (see, e.g., Specification p. 6, lines 9-12). Withdrawal of the rejection is respectfully solicited.

Claims 8-14 are rejected based on 35 U.S.C. §101 because the claimed invention is directed to non-statutory subject matter. Applicants respectfully traverse the rejection. Paragraph 7 of the Office Action states that the service discovery system described in Claim 8 “could be implemented in software alone” and that claims “directed towards software alone is per se nonstatutory.” Applicants respectfully disagree, and submit that Claims 8-14 are directed to statutory subject matter.

The “per se non-statutory” rule in the MPEP (see MPEP § 2106.01, first paragraph) is directed to descriptive material that is “claimed as descriptive material” instead of being claimed as recorded on computer readable medium. “Data structures not claimed as embodied in computer-readable media are descriptive material *per se* and are not statutory because they are not capable of causing functional change in the computer.” (MPEP § 2106.01 I). However, Claims 8-14 are not claimed as data structures, nor are they claimed as descriptive material. Claims 8-14 directed to systems having service discovery agents that, among other things, receive service discovery queries and provide service discovery responses.

Applicants submit that computer-related systems have long been accepted as belonging to at least one of the four statutory categories set forth in 35 U.S.C. § 101. “The

question of whether a claim encompasses statutory subject matter should not focus on which of the four categories of subject matter a claim is directed to -- process, machine, manufacture, or composition of matter -- [provided the subject matter falls into at least one category of statutory subject matter] but rather on the essential characteristics of the subject matter, in particular, its practical utility.” Applicants respectfully submit that Claims 8-14 exhibit practical utility relating to the field of computerized service discovery, and these claims further fall within at least one of the four statutory categories. As such, Applicants respectfully submit that Claims 8-14 are directed to statutory subject matter, and withdrawal of the rejection is respectfully solicited.

Claims 15-18 are rejected based on 35 U.S.C. §102(e) as being anticipated by U.S. Publication No. 2005/0078644 by Tsai et al. (hereinafter “Tsai”). Applicants respectfully traverse the rejections. However, in order to facilitate prosecution of the application and in a bona fide attempt to advance the application to allowance, the Applicants present this response with amendment to clarify particular aspects of the claimed invention.

Independent Claims 15 and 17 have been amended to set forth that the plurality of service discovery protocols include a local service discovery protocol operating via a local network and a remote service discovery protocol operating via an Internet host. These amendments are fully supported in the Application as originally filed (see, e.g., Specification p. 10, lines 15-24) therefore no new matter has been added. Applicants respectfully submit that Tsai fails to expressly or inherently disclose facilitating service discovery for both local and remote service discovery protocols.

Tsai is directed to “a wireless client device 22” that can “apprise a user of the services that are available in the network 10” as advertised by a “service discovery server 14.” (Tsai, 0011). Examples of these network services include “facsimile services...printer services... Internet access services...copy services, commercial ad broadcasting services ... location-based services... internal enterprise information technology (IT) services, FYI channel, streaming near-by wireless network information such as access points to assist faster roaming” etc. (Tsai, 0010). In particular the service discovery server 14 of Tsai “is operative for discovering services that are available within the network 10” and may

implement local service discovery such as “universal plug and play (UPnP)... service location protocol (SLP) ... [and] proprietary service discovery protocols and applications.” (Tsai, 0010).

As should be apparent from the services and protocols described in Tsai, Tsai is directed to local service discovery on the network 10, and Tsai neither inherently nor expressly describes an element that can utilize both a local service discovery protocol operating via a local network and a remote service discovery protocol operating via an Internet host. For at least this reason, Tsai fails to anticipate independent Claims 15 and 17 as amended. Dependent Claims 16 and 18 depend respectively from Claims 15 and 17. These dependent claims include all of the limitations of their respective base claims, and recite additional features which further distinguish these dependent claims from Tsai. Therefore, dependent Claims 16 and 18 are also allowable over Tsai.

Claims 1-14 and 19-24 are rejected based on 35 U.S.C. §103(a) as being unpatentable over Tsai in view of U.S. Patent No. 6,130,917 to Monroe (hereinafter “Monroe”). Applicants respectfully traverse the rejections. However, in order to facilitate prosecution of the application and in a bona fide attempt to advance the application to allowance, the Applicants present this response with amendment to clarify particular aspects of the claimed invention.

Independent Claims 1, 8, 19, and 23 have been amended to set forth that the plurality of service discovery protocols include a local service discovery protocol operating via a local network and a remote service discovery protocol operating via an Internet host. For the same reasons detailed above regarding the rejection of Claims 15-18, Tsai fails to teach or suggest a service discovery entity that can utilize both a local service discovery protocol operating via a local network and a remote service discovery protocol operating via an Internet host. Monroe was not relied upon to remedy the deficiencies of Tsai, nor does Tsai provide such a remedy. For at least this reason, Claims 1, 8, 19, and 23 are not rendered obvious by the combination of Tsai and Monroe, at least because the combination fails to teach or suggest all the limitations of these claims.

The rejections set forth in the Office Action also rely on Monroe to teach “a method of translating the service discovery queries into formats required by a plurality of service discovery protocols (Monroe, col. 2, lines 44-63).” (Office Action, p. 5). However, Applicant respectfully disagrees, and asserts that Monroe fails to expressly or inherently describe translating between different service discovery protocols.

Monroe is directed to a “protocol scheme [where] destination or receiving station is identified by a source or sending station in order to permit automatic reformatting of the source data into a compatible format and protocol scheme before transmission is initiated.” (Monroe, Abstract). The system described in Monroe facilitates “transmission of file source data to a destination system where the source data is incompatible with the source, where the operator may intervene to select the conversion parameter.” (Monroe, col. 4, lines 32-36). These transmissions may be made via “LAN, WAN, telephone line or other distributive network system.” (Monroe, col. 4, lines 54-55). However, Monroe does not inherently or expressly describe a network that uses “service discovery,” as the term is known and used in the art, nor does Monroe describe conversion between service discovery protocols.

As the term is generally used in the art, “service discovery” relates to automatically discovering services, including their properties, in a dynamic fashion. (e.g., Specification, p. 2, lines 7-8). In the rejection of Claims 1, 8, 19, and 23, the Office Action cites col. 2, lines 44-63 of Monroe to show translating the service discovery queries into formats required by a plurality of service discovery protocols. This portion of Monroe only describes “transmitting source data generated at a source system formatted with a source format to a remote destination system which may require a different, incompatible data format” and performing “protocol matching.” However, not only is Monroe silent on converting between service discovery protocols, Monroe fails to describe the use of any service discovery protocols at all.

Although Monroe describes matching “the protocol and the data format used by both the transmitting station and the receiving station” (Monroe, col. 1, lines 56-57), it is clear from the concepts and examples that these protocols are data transmission protocols (e.g.,

“Group III fax,” col. 1, lines 60-65; protocols using parameters such as “synchronous or asynchronous, start-stop sequencing, sync patterns, telephone number(s), I/O address router information, passwords where applicable, and the like,” col. 6, lines 5-8) and not service discovery protocols. Thus, Monroe’s description of converting between protocols does not teach translating between different service discovery protocols in as complete detail as is contained in the patent claims.

Further, Monroe fails to describe the use of service discovery at any stage when communicating and converting the source data. Monroe describes the use of a single “universal” station to perform conversions for any of “a variety of sending and receiving units.” (Monroe, col. 4, lines 63-65), but fails to expressly describe the use of service discovery to locate services of the universal station or the sending/receiving stations. Further, Monroe fails to suggest the use of a service discovery protocol for the universal station or sending/receiving units. For example, Monroe is silent regarding any automatic configuration of sending/receiving units that allow the units to discover services of the universal station, or properties of these services. As such Monroe fails to teach those aspects relied upon in the rejection of independent Claims 1, 8, 19, and 23, and these claims are allowable over the combination of Tsai and Monroe for this additional reason.

Dependent Claims 2-7, 9-14, 20-22 and 24, which are dependent from independent Claims 1, 8, 19, and 23, respectively, were also rejected under 35 U.S.C. §103(a) as being unpatentable over the combination of Tsai and Monroe. While Applicant does not acquiesce with any particular rejections to these dependent claims, it is believed that these rejections are now moot in view of the remarks made in connection with independent Claims 1, 8, 19, and 23. These dependent claims include all of the limitations of the base claim and any intervening claims, and recite additional features which further distinguish these claims from the cited references. “If an independent claim is nonobvious under 35 U.S.C. §103, then any claim depending therefrom is nonobvious.” M.P.E.P. §2143.03; citing *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988). Therefore, dependent Claims 2-7, 9-14, 20-22 and 24 are also allowable over the combination of Tsai and Monroe.

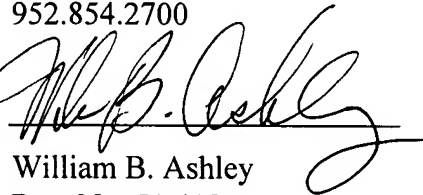
Authorization is given to charge Deposit Account No. 50-3581 (NOKM.065PA) any necessary fees for this filing. If the Examiner believes it necessary or helpful, the undersigned attorney of record invites the Examiner to contact the undersigned attorney to discuss any issues related to this case.

Respectfully submitted,

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Date: 27 November 2007

By:

A handwritten signature in black ink, appearing to read "W.B. Ashley", is written over a horizontal line.

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